

## FRD – 67 user's guide



Display	6 numeric digits of 67 mm height High impact red LEDs with a 30° intensity cone Automatic intensity adjustment
Interface	Field selectable RS-232 and RS485/422 Setup of communication parameters and protocol by use of a terminal/PC
Connection	Two cable glands and internal terminals Cable diameter 6mm to 12mm
Power	100-240VAC/max 25W or 12VDC selectable
Enclosure	Lacquered steel IP65 cabinet for outdoor

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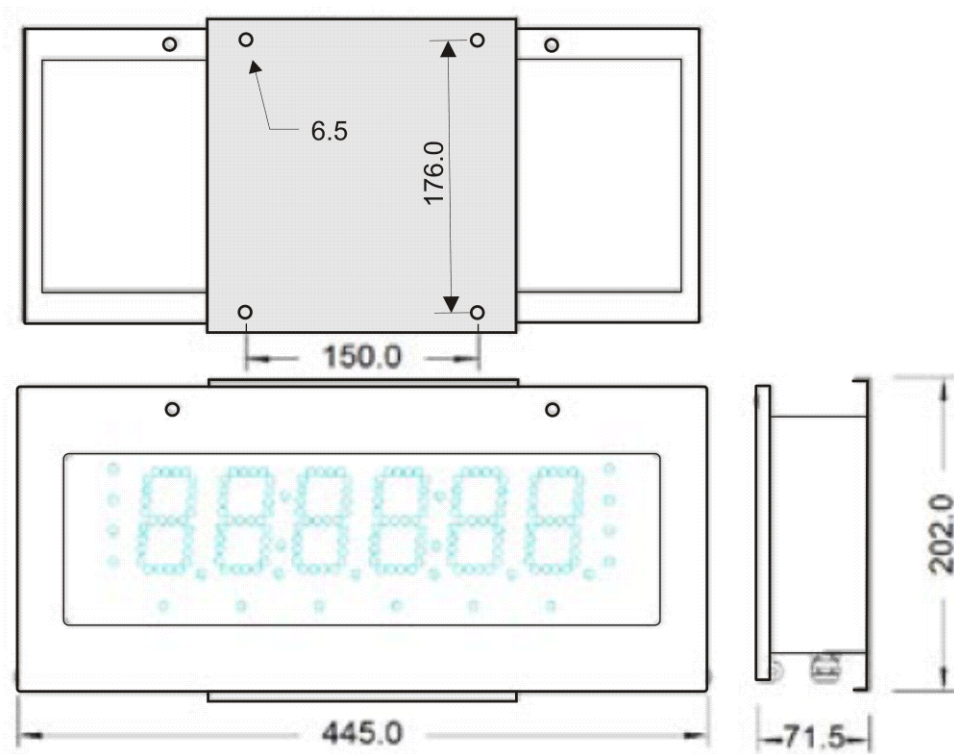


### IMPORTANT INSTALLATION NOTES

The enclosure must be connected to Protective Earth. This is vital for safe operation. Failure to observe correct grounding may cause serious injury or death. Grounding is further vital for full CE-compliance and must be provided for correct operation.

**Disconnect power when servicing the display**

**DIMENSIONS in metric millimeters**



### MECHANICAL MOUNTING

Open the front lid using a Torx TX-20 screwdriver. Internal screws are Torx TX-15 and Philips/flat for power supply terminals.

When mounting the display, use as large as possible bolts for fixing to a rigid flat surface. If mounting to a pole, adjust the pole flaps for a best fit to the actual pole and then tighten the band pipe clamps (option) thoroughly. If possible tilt the display downwards and direct toward the reader to maximize legibility. Tilting the display decreases reflections and improves contrast. Sun hood is normally not needed.

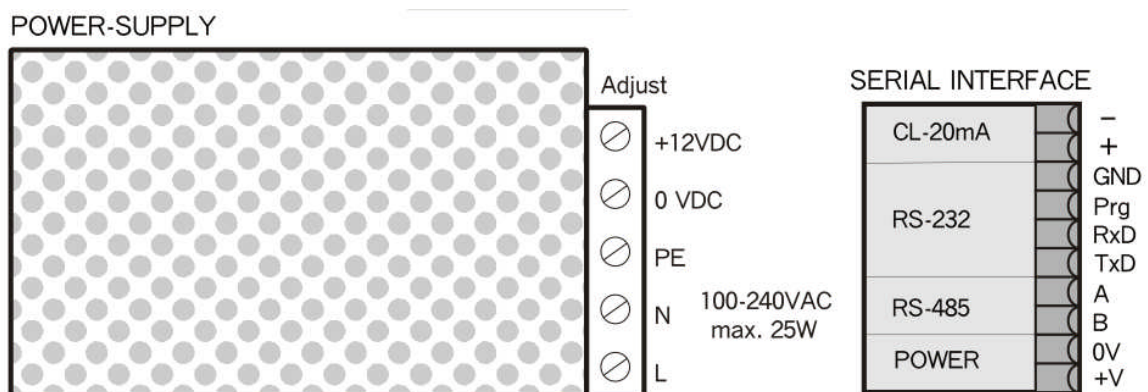
## NORMAL POWER-UP

When power is applied, the display should respond by a sequence of control messages like software number, baud rate and address. After the short start-up formality, display is blanked, filled with decimal points or zeroed.

For automatic settings and other controller card specific features, the behaviour may differ. Consult the actual User's Guide for the installed card.

## POWER CONNECTION

Connect the power line to the supply and make sure to use proper grounding



Check that the ground terminal on the power supply is connected to your system safety ground.

**NOTE!** Unused cable glands must be blocked.

**NOTE!** This unit should preferably always be powered to minimize condensation

## SERIAL PROTOCOL

The protocol is factory set to Norsk Display standard, fitting many vendors message format and a good solution for an addressed data link.

Standard message without address: <STX>12345,6<CR>

Addressed message to the display set up with adr=19:

<STX><SOH>19<STX>12345,6<CR>

To reach all displays on a collective data line: <STX><SOH>00<STX>12345,6<CR>

The address „00" signifies broadcast (reaching all connected displays)

All exemplified messages will result in the message „12345,6" on all addressed displays.

A Windows™ Utility program is available on Norsk Display Web page [www.norskdisplay.com](http://www.norskdisplay.com)

Highly recommended for safe setup of parameter



## **IMPORTANT MAINTENANCE NOTES**

**Disconnect power when servicing or maintaining the display !**

### **MAINTENANCE**

Normal maintenance includes washing off dust with a well wetted cloth. Use plenty of water with a mild detergent to avoid scratching the surface.

### **REPAIR**

All parts of the display are field repairable. You are however adviced to contact factory for specific instructions for repair. Make sure you maintain all approvals when replacing failing parts. Factory repair ensures a period of 12 months limited warranty.

[\*\*www.flintec.com\*\*](http://www.flintec.com)